

REMARKS

The Examiner has rejected claims 1, 3-7, 11-15, 17, 19 and 20 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,424,606 to Okazaki et al. In addition, the Examiner has rejected claim 18 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,831,449 to Kimura. The Examiner has further rejected claims 8-10 and 16 under 35 U.S.C. 103(a) as being unpatentable over Okazaki et al. in view of Kimura.

The Okazaki et al. patent discloses a method for detecting vibration in a disc drive and apparatus therefor, in which photodiodes A-F detect a laser beam reflected from the surface of a rotating disc, and the outputs therefrom are applied to a vibration detector 190. Based on the amount of the determined vibration, a microcontroller 150 takes appropriate action, e.g., reducing the speed of rotation of the disc.

As noted in MPEP §2131, it is well-founded that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 (as well as independent claim 17) relates to "a method of operating a storage device sensitive to vibrations in an

environment with a source of vibrations" and includes the limitations "measuring the signal performance of the storage device" and "when the measured signal performance of the storage device decreases below a pre-determined level, taking action to reduce the influence of vibrations generated by the source of vibrations", and "wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate, and data storage rate".

The Examiner now states that Okazaki et al. teaches "measuring the signal performance of the storage device (e.g., see column 3, lines 37-39 "measuring the displacement of the pickup head assembly with tracking disabled to determine a vibration value" and the value of the vibration is a representation of the signal behavior)".

Applicants submit that the Examiner is mistaken. In particular, as a prelude to the cited passage, Okazaki et al., at col. 3, lines 23-27, states:

"In still another aspect the present invention provides a method for detecting vibration in a read/write data storage drive for a removable data storage media, wherein the removable data storage media has at least one data track thereon, the method comprising the steps of:"

While Okazaki et al. may be concerned about the performance of a data storage drive, clearly Okazaki et al. is detecting vibration in the data storage drive. In the passage cited by the Examiner, Okazaki et al. is clearly measuring a distance, i.e., the displacement of the pickup head assembly. While the displacement of

the pickup head assembly due to vibration may eventually affect signal performance, measuring the displacement is not akin to measuring the signal performance of the storage device.

The Examiner then states that Okazaki et al. further teaches "when the measured performance of the storage device decreases below a pre-determined level taking action to reduce the influence of vibrations generated by the source of vibrations (e.g., see column 10, lines 16-27 "When the vibration value measured at resonance is greater than the predetermined vibration value limit, then the speed of operation is set 470 to low-speed mode, and the drive 100 is then operational 490 at the low speed. However, when the vibration value measured at resonance is less than the predetermined vibration value limit, then the speed of rotation is set 480 to high-speed mode, and the drive 100 is set to high speed. Low-speed refers to the speed of rotation of an unbalanced disc that will not cause annoyance to the user in the form of noise and vibration. High-speed refers to the maximum rated speed of the drive".).".

It should be apparent that Okazaki et al. seeks to reduce the amount of noise and vibration generated by a storage drive when operating with an unbalanced storage disk. However, this has nothing to do with the signal performance of the storage device.

Claim 1 further limits "the signal performance of the storage device" to "wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate, and data storage rate".

The Examiner attempts to find this limitation in Okazaki et al. and states "see column 6, lines 5-15 wherein the output behavior of the signal is including the access time (with regard reading data from the disc 105)".

The noted section of Okazaki et al. states:

"To read data from the disc 105, the sum of the output signals from the photodiodes A, B, C and D (in FIG. 2) are fed to the RF amplifier 135 and passes through a differential amplifier to generate a RF signal (RFGO). This signal is provided to the DSP 120 to perform EFM signal demodulation, and the first and second layer of the error correction. Resulting serial data is provided to the CD-ROM decoder 155. The CD-ROM decoder 155 extracts the data for transmission to a host from the serial data, performs third layer error detection and correction code (EDC) and error correction code (ECC), and sends the corrected data to the host computer through the host interface 160."

It should be apparent from the above that Okazaki et al. is merely describing how data is read from the disk 105. However, contrary to the Examiner's assertion, there is no statement regarding "access time", nor the measurement of any "access time". Further, Applicants would like to point out that the claim limitation "wherein the signal performance of the storage device includes at least one of access time of the storage device, data access rate, and data storage rate" is not arbitrarily inserted into the claim, but rather, describes terms appearing in the claim, to wit, "the signal performance of the storage device". Hence, quite clearly, the measurement of displacement of the pickup head assembly is not included in the group of "access time of the storage device, data access rate, and data storage rate".

The Kimura patent discloses a television apparatus incorporating receiver and video tape recorder in a common cabinet, in which when vibrations in the cabinet exceed a particular level, if the VTR is in a recording mode, then the resulting recorded image may, when played back, exhibit "image shake" or distortion in the resulting displayed picture.

The Examiner now states:

"As to claim 18, Kimure discloses Consumer electronics apparatus comprising: means for receiving a stream of audio-visual data; (a storage device arranged to store the stream of audiovisual data on a disk (see column 3, lines 60-67 and figure 2)."

It should be apparent that the Examiner is overlooking several limitations included in claim 18, including "the circuit as claimed in claim 17 for operating the storage device". Further, Kimura clearly states, at col. 3, lines 36-38, that the television receiver includes "a video recording and reproducing device, for example, constituted by an 8mm video tape recorder (VTR)". Nowhere is there any statement or suggestion of "a storage device for storing the stream of audio-visual data on a disk". Applicants remind the Examiner that claim 17, from which claim 18 depends, specifically states "the circuit comprising a processor, characterized in that the processor is arranged to:

measure the signal performance of the storage device; and
when the measured signal performance of the storage device decreases below a pre-determined level, take action to reduce the influence of vibrations generated by the source of vibrations, wherein the performance of the storage device includes at least one

of access time of the storage device, data access rate, and data storage rate."

Applicants assert that nowhere in Kimura is there any disclosure or suggestion of measuring the signal performance and reducing the influence of vibration when the signal performance decreases below a pre-determined level.

In view of the above, Applicants believe that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1 and 3-20, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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